

Application No: 10/510,177
Attorney's Docket No: BAE 3055

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks. Claims 1, 3-5, 9, 11, 12, 18, 19, 23, and 24 have been amended. Claims 6-8, 10, 13, and 25 are cancelled without prejudice or disclaimer of the subject matter presented therein. Claims 26-28 have been added. Currently, claims 1-28 are pending in the present application of which claims 1, 11, and 26 are independent. No new matter has been added.

Claims 1-25 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Komiya (U.S. Patent Number 4,798,397) in view of Layman (U.S. Patent Number 1,380,659), both of record. Claims 1-25 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Seksaria (U.S. Patent Application Number 2004/0075234A1) in view of Layman (U.S. Patent Number 1,380,659), both of record. The above rejections are respectfully traversed for at least the reasons set forth below. Claims 21, 23, and 25 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner argues that there is insufficient antecedent basis for the phrase "fully returned flanges." Claims 8-10 were objected to on the ground that characterization of a welded joint as "high quality" is indefinite.

Claim Rejection Under 35 U.S.C. §112

Claims 21, 23, and 25 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, Claims 21, 23, and 25 were

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rejected because it allegedly included a phrase with insufficient antecedent basis. Claim 3 has been amended to depend from claim 2 rather than claim 1, thereby providing antecedent basis for Claim 21. Claim 5 has been amended to depend from Claim 28, thereby providing antecedent basis for Claim 23. The cancellation of Claim 25 renders this rejection moot. The Examiner is therefore respectfully requested to withdraw the rejection of Claims 21 and 23.

Claims 8-10 were objected to on the ground that characterization of a welded joint as "high quality" is indefinite. The phrase "high quality" has been deleted from Claim 9. The cancellation of Claims 8 and 10 renders this rejection moot. The Examiner is therefore respectfully requested to withdraw the rejection of Claim 9.

Claim Rejection Under 35 U.S.C. §103

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in MPEP § 706.02(j):

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

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Therefore, if the above-identified criteria are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Claim 1 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Komiya or Seksaria in view of Laymon. This rejection is respectfully traversed because Komiya, Seksaria, and Laymon, considered singly or in combination, fail to teach or suggest the claimed invention as set forth in amended claim 8 and its dependents.

Komiya discloses a vehicular suspension arm having a metal component with a structural I-beam section. As noted by the Examiner, Komiya fails to disclose a vehicular suspension arm formed from two stamped components.

Seksaria discloses a vehicular suspension arm having an aluminum metal component with a structural I-beam section. As noted by the Examiner, Seksaria fails to disclose a vehicular suspension arm formed from two stamped components.

Laymon discloses a link formed from two sheet metal components having flanges.

Claim 1, as amended, recites a vehicular suspension arm, comprising an upper sheet metal stamped component with a first outer face and a first inner face, and comprising a first central web portion with two opposite sides and first upstanding flange portions at said opposite sides of said first web portion; and a lower sheet metal stamped component with a second outer face and a second inner face, and comprising a second central web portion with two opposite sides and second upstanding flange portions at said opposite sides of said second web portion. The upper stamped component and lower stamped component are configured when placed into

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contact along said first and second inner faces to create a gap along a peripheral, joining edge. This gap facilitates a high quality welded joint which combines both butt and fillet configurations to join four material surfaces of the upper and lower components, and said upper and lower components are rigidly attached to each other by means of said welded joint. The Official Action asserts that Komiya and Seksaria each disclose all the elements of claim 1 except for formation of the I-beam from two stamped components. The Official Action asserts that Laymon teaches a link formed from two stamped components. However, the Applicants submit that neither Komiya, Seksaria nor Laymon teaches or suggests a high quality welded joint which combines both butt and fillet configurations to join four material surfaces. Komiya and Seksaria fail to disclose welding to create an I-beam since the I-beam disclosed therein is a single solid structural element. Laymon fails to teach a high quality welded joint which combines both butt and fillet configurations to join four material surfaces of the upper and lower components; the method taught by Laymon uses welding, particularly spot welding, in conjunction with brazing (See page 1, lines 49-51, 105-108). Spot welding produces a weld joining the faces of two surfaces, rather than a weld along edge surfaces. Laymon neither teaches or suggests a high quality welded joint which combines both butt and fillet configurations, or a method of making the same.

At least by virtue of Komiya's, Seksaria's and Laymon's failure to teach or suggest the above identified element of claim 1, a *prima facie* case of obviousness has not been established under 35 U.S.C. § 103. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claim 1. Claims 2, 3, 14, 15, 16, 20, and 21 depend, directly or indirectly, from

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allowable claim 1 and are also allowable over either Komiya or Seksaria in view of Laymon at least by virtue of their dependencies.

Claim 11 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Komiya or Seksaria in view of Laymon. This rejection is respectfully traversed because Komiya and Laymon, considered singly or in combination, fail to teach or suggest the claimed invention as set forth in amended claim 1 and its dependents.

Komiya discloses a vehicular suspension arm having a metal component with a structural I-beam section. As noted by the Examiner, Komiya fails to disclose a vehicular suspension arm formed from two stamped components.

Seksaria discloses a vehicular suspension arm having an aluminum metal component with a structural I-beam section. As noted by the Examiner, Seksaria fails to disclose a vehicular suspension arm formed from two stamped components.

Laymon discloses a link formed from two sheet metal components having flanges.

Claim 11, as amended, recites a vehicular suspension arm, comprising an upper sheet metal stamped component with a first outer face and a first inner face, and comprising a first central web portion with two opposite sides and first upstanding flange portions at said opposite sides of said first web portion; and a lower sheet metal stamped component with a second outer face and a second inner face, and comprising a second central web portion with two opposite sides and second upstanding flange portions at said opposite sides of said second web portion. The upper stamped component and lower stamped component are rigidly attached to each other along said first and second inner faces in a back-to-back configuration using projection welding

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across the respective first and second web portions. The Official Action asserts that Komiya and Seksaria each disclose all the elements of claim 1 except for formation of the I-beam from two stamped components. The Official Action asserts that Laymon teaches a link formed from two stamped components. However, the Applicants submit that neither Komiya, Seksaria nor Laymon teaches or suggests projection welding to attach the two stamped components. Projection welding is a resistance welding process which produces coalescence of metals with the heat obtained from resistance to electrical current through the work parts, where the work parts are held together under pressure by electrodes. Projections are designed in one part in projection welding. These act as current concentrators for the welding process. Projection welding rigidly attaches components to each other in a face-to-face configuration. Komiya and Seksaria fail to disclose projection welding since the I-beams disclosed therein are a single solid structural element. Laymon teaches away from use of projection welding to firmly bond two parts to form an I-beam; the method taught by Laymon uses welding, particularly spot welding, in conjunction with brazing (See page 1, lines 49-51, 105-108):

In practice I prefer to spot-weld these parts to hold them together, and then to braze them, preferably by immersion in the spelter.

Laymon, page 1, lines 105-108.

Spot welding only produces a single weld at a time, in contrast to projection welding, which allows production of several welds produced simultaneously, the number of welds depending on the number of projections in the component. The current process allows formation of a firm bond using a single welding step, without requiring a subsequent brazing step.

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At least by virtue of Komiya's, Seksariya's, and Laymon's failure to teach or suggest the above identified element of claim 1, a *prima facie* case of obviousness has not been established under 35 U.S.C. § 103. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claim 11. Claims 4, 17, 22, and 24, as well as newly presented claim 27, depend, directly or indirectly, from allowable claim 11 and are also allowable over Komiya or Seksaria in view of Laymon at least by virtue of their dependencies.

Newly Presented Claim

Claim 26 has been added. This claim is believed to be allowable over the prior art of record, Komiya and Laymon, for at least the following reasons.

Komiya discloses a vehicular suspension arm having a metal component with a structural I-beam section. As noted by the Examiner, Komiya fails to disclose a vehicular suspension arm formed from two stamped components.

Seksaria discloses a vehicular suspension arm having an aluminum metal component with a structural I-beam section. As noted by the Examiner, Seksaria fails to disclose a vehicular suspension arm formed from two stamped components.

Laymon discloses a link for a brake rocker shaft formed from two sheet metal components having flanges. A rocker shaft is used to rock camshafts in an engine.

Claim 26 is directed to a suspension system, comprising a vehicular suspension arm including an upper sheet metal stamped component and a lower sheet metal stamped component. Laymon, Komiya, and Seksaria each fail to provide any motivation to substitute a brake rocker

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shaft from an engine, as taught by Laymon, for an I-beam in a suspension arm, as taught by Komiya and Seksaria. A person of ordinary skill in the art would consider engine components such as rocker shafts to be a non-analogous field of art to suspension systems, since suspension systems and rocker shafts are used for substantially different purposes in a car. A suspension system according to claim 1 is part of the unsprung mass of the vehicle (The unsprung mass includes the mass of components such as the wheel spindles, wheel bearings, tires, driveshafts, springs, shock absorbers, and suspension links.). The sprung mass, on the other hand, is supported by the suspension system and the body and other components supported by the suspension system. The suspension system is required to be very strong in order to support the mass of the vehicle. The rocker arms of Laymon, on the other hand, are part of the reciprocating mass of the engine, and are required to be very light in weight and operate about the rocker shaft of the engine very rapidly to allow the engine to operate at high speeds. It would not have been obvious to one of ordinary skill in the art that a rocker arm design for use in the reciprocating mass of the engine would have sufficient strength to serve as a component of the unsprung mass of the vehicle and support the weight of the vehicle. Komiya and Seksaria each show suspension arms, but fail to provide any teaching or suggestion that such a substitution would be effective.

Accordingly, the Examiner is respectfully requested to allow claim 26. Claims 5, 9, 12, 19, 23, and newly presented claim 28 depend from allowable claim 26 and are also allowable over Komiya in view of Laymon at least by virtue of their dependencies.

Newly presented claim 27 is believed to be allowable for reasons which have already been addressed.

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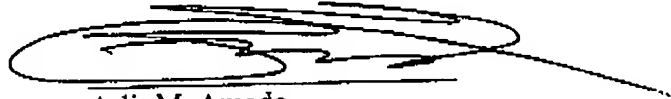
CONCLUSION

While we believe that the instant amendment places the application in condition for allowance, should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner telephone the undersigned attorney in order to expeditiously resolve any outstanding issues.

In the event that the fees submitted prove to be insufficient in connection with the filing of this paper, please charge our Deposit Account Number 50-0578 and please credit any excess fees to such Deposit Account.

Respectfully submitted,
KRAMER & AMADO, P.C.

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